



KENTUCKY PUBLIC SERVICE COMMISSION
211 SOWER BLVD.
P. O. BOX 615
FRANKFORT, KENTUCKY 40602

*PSC CASE NO. _____
*FILING FEE REC'D: YES _____ NO _____
(* FOR OFFICE USE ONLY)

**WELL DETERMINATION APPLICATION
(18 CFR PART 270)**

(This application and all supporting documents must be submitted in duplicate to the Kentucky Public Service Commission at the above address, together with the \$50.00 filing fee payable to the Kentucky State Treasurer per 807 KAR 5:031.)

(PLEASE TYPE OR PRINT)

APPLICANT NAME: _____

ADDRESS: _____

DATE: _____

NAME & TITLE OF PERSON TO WHOM QUESTIONS CONCERNING THIS APPLICATION SHALL BE ADDRESSED:

NAME: _____

ADDRESS: _____

TELEPHONE: _____

WELL INFORMATION: PERMIT NO. _____ (required)

WELL NAME & NO. _____

CARTER COORDINATE LOCATION: SECTION _____ LETTER _____ NUMBER _____

COUNTY: _____ 7 1/2 MINUTE QUADRANGLE: FNL _____ FEL _____

_____ FSL _____ FWL _____

PART 270 CATEGORY APPLIED FOR (CHECK ONE ONLY)

(SUBMIT A SEPARATE APPLICATION
AND FEE FOR EACH CATEGORY)

18 CFR PART 270 / SUBSECTION: Check appropriate box and submit only those pages which apply to that category, along with all required supporting documents. Page

_____ 302	Occluded Natural Gas Produced From Coal Seams	2
_____ 303	Natural Gas Produced From Devonian Shale	3
_____ 304	Tight Formation Gas	4
_____ 305	Request for Determination of Tight Formation Areas	5

THIS PAGE MUST BE PAGE 1 OF EACH APPLICATION. ATTACH ONLY THE OTHER PAGES THAT APPLY TO THE NGPA CATEGORY CHECKED, ALONG WITH ALL REQUIRED SUPPORTING DOCUMENTS.

WELL CLASSIFICATION FORM
OCCLUDED NATURAL GAS PRODUCED FROM COAL SEAMS
SUBSECTION 302

Permit No.: _____ Well Name & No.: _____

OPERATOR: _____

ADDRESS: _____

Application must contain: (a) FERC Form No. 121 (b) All well completion reports.
(c) A radioactivity, electric or other log, which will define the coal seams.
(d) Evidence to establish that the natural gas was produced from a coal seam.

AFFIDAVIT

The undersigned, being duly sworn, deposes and states:

1. Check one:

- _____ The operator above named is individually owned and operated by the undersigned.
_____ The operator above named is a partnership of which the undersigned is a general partner.
_____ The operator above named is a corporation duly authorized to do business in this state and the undersigned is an officer or legal representative of the corporation and has been authorized by the corporation to make this application.
_____ The operator above named is a trust of which the undersigned is a trustee and empowered to make this application.

2. Check if applicable:

- _____ The well for which this determination is sought is being operated under a joint operating agreement of which the undersigned is a party and notice of the application has been given to all other parties to the agreement.

3. The natural gas for which this determination is being sought is being produced from coal seams through (check one):

- _____ A well the surface drilling of which began after December 31, 1979, but before January 1, 1993.
_____ A recompletion commenced after January 1, 1993, in a well the surface drilling of which began after December 31, 1979 but before January 1, 1993.
_____ A recompletion that was commenced after December 31, 1979 but before January 1, 1993 where such gas could not have been produced from any completion location in existence in the well bore before January 1, 1980.

4. The undersigned further states that he has no knowledge of any information not described in the application that is inconsistent with the conclusions stated herein.

Name of Operator: _____

By: (If applicable) _____

Title: (If applicable) _____

STATE OF KENTUCKY

COUNTY OF _____, TO WIT;

Subscribed and sworn to before me by _____,
(Name of undersigned) (Title, if applicable)

on this the ____ day of _____, 20____.

Notary Public

(Notarial Seal)

My commission expires: _____

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Eff. 5-8-01

WELL CLASSIFICATION FORM
NATURAL GAS PRODUCED FROM DEVONIAN SHALE
SUBSECTION 303

Permit No.: _____ Well Name & No.: _____

OPERATOR: _____

Application must contain: (a) FERC Form No. 121 (b) All well completion reports. (c) A gamma ray log with superimposed indications of the shale base line and the gamma ray index of 0.7 over the Devonian age stratigraphic section designated pursuant to § 270.101(b)(8). (d) A reference to a standard stratigraphic chart or text establishing that the producing interval is a shale of Devonian age.

AFFIDAVIT

The undersigned, being duly sworn, deposes and states:

2. Check one:

- ☐ The operator above named is individually owned and operated by the undersigned.
- ☐ The operator above named is a partnership of which the undersigned is a general partner.
- ☐ The operator above named is a corporation duly authorized to do business in this state and the undersigned is an officer or legal representative of the corporation and has been authorized by the corporation to make this application.
- ☐ The operator above named is a trust of which the undersigned is a trustee and empowered to make this application.

2. Check if applicable:

- ☐ The well for which this determination is sought is being operated under a joint operating agreement of which the undersigned is a party and notice of the application has been given to all other parties to the agreement.

4. The natural gas for which this determination is being sought is being produced from Devonian shale through (check one):

- ☐ A well the surface drilling of which began after December 31, 1979, but before January 1, 1993.
- ☐ A recompletion commenced after January 1, 1993, in a well the surface drilling of which began after December 31, 1979 but before January 1, 1993.
- ☐ A recompletion that was commenced after December 31, 1979 but before January 1, 1993 where such gas could not have been produced from any completion location in existence in the well bore before January 1, 1980.

4. Attached hereto as Appendix 1 are the operator's calculations of the percentage of footage of the producing interval which is not Devonian shale as indicated by a Gamma ray index of less than 0.7, and the operator's demonstration that the percentage of potentially disqualifying non-shale footage for the stratigraphic section selected is equal to or less than 5 percent of the Devonian stratigraphic age interval designated pursuant to § 270.101(b)(7).

5. The undersigned further states that he has no knowledge of any information not described in the application that is inconsistent with the conclusions stated herein.

Name of Operator: _____

By: (If applicable) _____

Title: (If applicable) _____

STATE OF KENTUCKY

COUNTY OF _____, TO WIT;

Subscribed and sworn to before me by _____,
(Name of undersigned) (Title, if applicable)

on this the ____ day of _____, 20____.

Notary Public

(Notarial Seal)

My commission expires: _____

WELL CLASSIFICATION FORM
TIGHT FORMATION GAS
SUBSECTION 304

Permit No.: _____ Well Name & No.: _____

OPERATOR: _____

Application must contain: (a) FERC Form No. 121. (b) All well completion reports. (c) Either (1) A map that identifies the surface location of the well and the completion location in the well in the designated tight formation, along with the geographic boundaries of the designated tight formation, or a location plat identifying the surface location of the well and the completion location in the designated tight formation, along with a list of the tract (or tracts) of land that comprise the designated tight formation **OR**, (2) Geologic and Engineering data to support the requested determination including (but not limited to): (a) the in situ permeability value (in millidarcies), pre-stimulation stabilized production rate (in Mcf per day), and depth to the top of the formation (in feet) for the well, and (b) the underlying well test, well logs, cross-sections, or other data sources, and all calculations performed to derive the formation tops, permeability values, and pre-stimulation stabilized production rates shown in the well-by-well table. (d) A complete copy of the well log, including the log heading identifying the designated tight formation stratigraphically. (e) Such other information as the operator deems relevant to making this determination.

AFFIDAVIT

The undersigned, being duly sworn, deposes and states:

3. Check one:

- _____ The operator above named is individually owned and operated by the undersigned.
_____ The operator above named is a partnership of which the undersigned is a general partner.
_____ The operator above named is a corporation duly authorized to do business in this state and the undersigned is an officer or legal representative of the corporation and has been authorized by the corporation to make this application.
_____ The operator above named is a trust of which the undersigned is a trustee and empowered to make this application.

2. Check if applicable:

- _____ The well for which this determination is sought is being operated under a joint operating agreement of which the undersigned is a party and notice of the application has been given to all other parties to the agreement.

5. The natural gas for which this determination is being sought is being produced from a designated tight formation through (check one):

- _____ A well the surface drilling of which began after December 31, 1979, but before January 1, 1993.
_____ A recompletion commenced after January 1, 1993, in a well the surface drilling of which began after December 31, 1979 but before January 1, 1993.
_____ A recompletion that was commenced after December 31, 1979 but before January 1, 1993 where such gas could not have been produced from any completion location in existence in the well bore before January 1, 1980.

4. The undersigned further states that he has no knowledge of any information not described in the application that is inconsistent with the conclusions stated herein.

Name of Operator: _____

By: (If applicable) _____

Title: (If applicable) _____

STATE OF KENTUCKY

COUNTY OF _____, TO WIT;

Subscribed and sworn to before me by _____,
(Name of undersigned) (Title, if applicable)

on this the __ day of _____, 20__.

(Notarial Seal)

Notary Public

My commission expires: _____ Page 4

Eff. 5-08-01



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**REQUEST FOR TIGHT FORMATION GAS DESIGNATION
SUBSECTION 305**

The undersigned operator hereby requests that the Commission designate the area described in the attached documentation as a Tight Formation Area as defined in 18 CFR Part 270, Subsection 305. In support hereof, the operator submits the following information as attachments hereto.

Attachment 1 - Geological and geographical descriptions of the formation, or portion thereof, for which determination is requested.

Attachment 2 - Geological and engineering data to support the requested determination, including (but not limited to):

(i) A map of the area for which a tight formation determination is being sought that clearly locates and identifies all data wells and all dry holes that penetrate the subject formation and all wells that are currently producing from the subject formation.

(ii) A well-by-well table of each in situ permeability value (in millidarcies), pre-stimulation stabilized production rate (in Mcf per day), and depth to the top of the formation (in feet) for each well, and the arithmetic mean of each set of data.

(iii) Any data excluded from the above calculations and a statement explaining why the data was excluded.

(iv) The underlying well test, well logs, cross-sections, or other data sources, and all calculations performed to derive the formation tops, permeability values, and pre-stimulation stabilized production rates shown in the well-by-well table.

(v) Such other information as the operator deems relevant to making this determination.

Name of Operator: _____

By: (If applicable) _____

Title: (If applicable) _____

STATE OF KENTUCKY

COUNTY OF _____, TO WIT;

Subscribed and sworn to before me by _____,
(Name of undersigned) (Title, if applicable)
on this the ____ day of _____, 20____.

Notary Public

(Notarial Seal)

My commission expires: _____



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DETERMINATION OF TIGHT FORMATION AREAS SUBSECTION 305

(1) Within the geographic boundaries of the portion of the formation being recommended for tight formation designation, the estimated in situ gas permeability, throughout the pay section, is expected to be 0.1 millidarcy (md) or less. The expected in situ permeability is to be determined through an arithmetic mean averaging of the known permeabilities obtained from the wells that penetrate, and have a pay section in, such portion of such formation.

(2) Within the geographic boundaries of the portion of the formation being recommended for tight formation designation, the stabilized production rate of natural gas, against atmospheric pressure, of wells completed for production in such portion of such formation, without stimulation, is not expected to exceed the production rate determined in accordance with the table below. Such expected stabilized, pre-stimulation production rate is to be determined through an arithmetic mean averaging of the known stabilized, pre-stimulation production rates obtained from the wells that penetrate, and have a pay section in, such portion of such formation.

If the average depth to the top of the formation (in feet)		The Maximum Allowable Production Rate of Natural Gas (in Mcf per day) may not exceed—
Exceeds but does	not exceed	
0	1,000	44
1,000	1,500	51
1,500	2,000	59
2,000	2,500	68
2,500	3,000	79
3,000	3,500	91
3,500	4,000	105
4,000	4,500	122
4,500	5,000	141
5,000	5,500	163
5,500	6,000	188
6,000	6,500	217
6,500	7,000	251
7,000	7,500	290

**DETERMINATION OF TIGHT FORMATION AREAS - CONTINUED
SUBSECTION 305**

7,500	8,000	336
8,000	8,500	388
8,500	9,000	449
9,000	9,500	519
9,500	10,000	600
10,000	10,500	693
10,500	11,000	802
11,000	11,500	927
11,500	12,000	1,071
12,000	12,500	1,238
12,500	13,000	1,432
13,000	13,500	1,655
13,500	14,000	1,913
14,000	14,500	2,212
14,500	15,000	2,557

Submissions. The following shall be submitted to substantiate the determination:

- (1) Geological and geographical descriptions of the formation, or portion thereof, which is determined to qualify as a tight formation; and
- (2) Geological and engineering data to support the determination, including (but not limited to):
 - (i) A map of the area for which a tight formation determination is being sought that clearly locates and identifies all data wells and all dry holes that penetrate the subject formation and all wells that are currently producing from the subject formation.
 - (ii) A well-by-well table of each in situ permeability value (in millidarcies), pre-stimulation stabilized production rate (in Mcf per day), and depth to the top of the formation (in feet) for each well, and the arithmetic mean of each set of data.
 - (iii) For any data that the jurisdictional agency excludes from the above calculations, a statement explaining why the data was excluded.
 - (iv) The underlying well test, well logs, cross-sections, or other data sources, and all calculations performed to derive the formation tops, permeability values, and pre-stimulation stabilized production rates shown in the well-by-well table.
 - (v) Any other information relevant and/or relied upon in making the determination.